

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) A pattern reading apparatus, comprising:

a minute-area light source that causes an illumination light beam to be incident on an object surface having a pattern formed thereon as an object to be read;

an objective lens that converges a light beam carrying the information of the pattern;

a spatial filter having a shading region that shades a portion of the light beam that forms an image of said light source from the light beam, said spatial filter shielding non-diffusing component of the light beam and permitting formation of an image by the diffusing component of the light beam, said spatial filter being positioned such that a size of an image of said light source formed by said objective lens is smaller than a size of the image at a paraxial image point; and

an imaging lens that forms the image of the pattern using the portion of the light beam that passes through said spatial filter.

Claim 2. (Canceled)

3. (Previously Presented) A pattern reading apparatus according to claim 1, wherein a distance L from said spatial filter to a surface of said objective lens nearest to said spatial filter satisfies the condition $0.06f_o < L < 0.95f_o$, where f_o represents the focal length of said objective lens.

4. (Previously Presented) The pattern reading apparatus according to claim 1, wherein said spatial filter is positioned such that the size of the image of said light source formed by said objective lens is minimized.

5. (Previously Presented) The pattern reading apparatus according to claim 1, wherein said light source is positioned such that the illumination light beam emitted from said light source reaches the object surface through said objective lens and the light beam from the object surface passes through said objective lens to be incident on said spatial filter.

6. (Original) The pattern reading apparatus according to claim 5, wherein said objective lens is positioned such that an optical axis of said objective lens is perpendicular to the object surface, and wherein said light source and said imaging lens are disposed on opposite sides of the optical axis.

7. (Original) The pattern reading apparatus according to claim 6, further comprising an imaging element positioned at the imaging position of the pattern for reading the image of the pattern.

8. (Original) The pattern reading apparatus according to claim 7, said objective lens being positioned such that a light beam from a point on the object surface is emitted from said objective lens as a non-parallel light beam, said imaging lens and said imaging element being movable along an optical axis of said imaging lens to change a magnification.

Claims 9-21. (Canceled)

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22. (Previously Presented) The pattern reading apparatus according to claim 1, wherein the illumination beam, incident onto the object surface, is a substantially parallel light beam.

Claims 23-24. (Canceled)